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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/612,945	07/07/2003	Byung-Chul Ahn	8733.330.10-US	6662

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EXAMINER

LOKE, STEVEN HO YIN

ART UNIT PAPER NUMBER

2811

DATE MAILED: 04/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/612,945

Applicant(s)

AHN, BYUNG-CHUL

Examiner

Steven Loke

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2811

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 16-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 16-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
2. The abstract of the disclosure is objected to because the abstract should disclose the method to make the device instead of the structure of the device.
3. The disclosure is objected to because of the following informalities: In pages 9, 11, 14, 15, 16, the reference numerals for the source and drain electrodes should be 104 and 106 instead of 106 and 104. In pages 11, 16, the reference numerals for the source and drain ohmic contact regions should be 100a and 100b instead of 100b and 100a.

Appropriate correction is required.

4. Claim 22 is objected to because of the following informalities: Claim 22, lines 1-2, the phrase "the second insulating layers" has no antecedent basis. Appropriate correction is required.
5. Claims 16-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Fig. 6 only discloses a drain ohmic contact region [100b] on each of the amorphous silicon layers [100]. It is unclear where are the other drain ohmic contact regions on each of the amorphous silicon layers as claimed in claim 16 (lines 7-8).

Since claim 16 (line 7) only discloses a source region, it is unclear where is the source ohmic contact region (claim 16, lines 13-14) in the device.

In claim 20, lines 1-2, the phrase "the active layers" is unclear as to where are the active layers in the device.

In claim 22, line 2, the phrase "the active layers" is unclear as to where are the active layers in the device. Figs. 6-8 disclose the source and drain electrodes [104, 106] are in contact with the source and drain ohmic contact regions [100a, 100b] formed in each of the active layers [100].

In claim 23, line 1, the phrase "doped source and drain regions" is unclear as to where are the doped source and drain regions in the device. Figs. 11-13 disclose the source and drain ohmic contact regions [100a, 100b] formed on the source and drain electrodes [104, 106]. It is believed that claim 23 should rewrite as "forming the source and drain ohmic contact regions having island-shapes on the source and drain electrodes".

In claim 25, line 2, the phrase "the plurality of active layers" is unclear as to where are the active layers in the device.

6. Claim 16 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

7. The following is a statement of reasons for the indication of allowable subject matter: The major difference in the claims not found in the prior art of record is forming spaces between the substrate and the amorphous silicon layers.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Loke whose telephone number is (571) 272-1657. The examiner can normally be reached on 7:50 am to 5:20 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Lee can be reached on (571) 272-1732. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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April 28, 2004

Steven Loke  
Primary Examiner

